PERGAMON

Journal of Quantitative Spectroscopy & Radiative Transfer 76 (2003) III–V

Journal of Quantitative Spectroscopy & Radiative Transfer

www.elsevier.com/locate/jqsrt

List of Contents

NUMBER 1

D. Stankevich, Yu. Shkuratov, Ye. Grynko and **K. Muinonen** — 1 Computer simulations for multiple scattering of light rays in systems of opaque particles

O. Sogut, A. Küçükönder, E. Büyükkasap, E. Küçükönder, B.G. Durdu and **H. Çam** — 17 Measurement of K-shell fluorescence yields for Br and I compounds using radioisotope XRF

W.F. Wang — 23 Atomic-potential parameters for H_2 and D_2: quantum corrections in the calculation of second-virial coefficients

X.-d. Li, S.-s. Han, C. Wang and **Z.-z. Xu** — 31 Ultrahigh magnetic field diagnostic with spectral profile calculation

J.P. Bardet, J.C. Valognes and **Y. Vitel** — 45 Comparative study on Stark broadenings of neutral He(I) spectral lineshapes in dense cold plasmas (1.0×10^{17} cm$^{-3} < N_e < 1.6 \times 10^{18}$ cm^{-3}, 20,000 K $< T_e <$ 30,000 K)

M.F. Modest — 69 Narrow-band and full-spectrum k-distributions for radiative heat transfer—correlated-k vs. scaling approximation

D.D. Markushev, J. Jovanovic-Kurepa and **M. Terzic** — 85 Excitation dynamics during the multiphoton absorption in SF_6 + buffer-gas mixtures

C. Çakir, G. Budak, A. Karabulut and **Y. Şahin** — 101 Analysis of trace elements in different three region coals in Erzurum (Turkey): a study using EDXRF

Note

C. Tezcan, A. Kaşkaş and **M.Ç. Güleçyüz** — 107 Radiation transfer in an inhomogeneous half-space

117 Publisher's Note

News

L.S. Rothman — 119 A brief report on a HITRAN conference

NUMBER 2

T. Tanaka 121 Integration of Chandrasekhar's integral equation

J. Urban 145 Optimal sub-millimeter bands for passive limb observations of stratospheric HBr, BrO, HOCl, and HO_2 from space

X. Li, C. Wang, S. Han and **Z. Xu** 179 Theoretical calculation of the isoelectronic line ratio of Li-like Ti and Cr under different mixture ratios

E.S. Chalhoub 193 Discrete-ordinates solution for radiative-transfer problems

B. Yan and **K. Stamnes** 207 Fast yet accurate computation of the complete radiance distribution in the coupled atmosphere–ocean system

L.H. Liu 225 Multiple size group analysis for transient radiative heating of particle polydispersions

Book review

S.S. Penner 235 Physics of shock waves and high-temperature hydrodynamic phenomena

NUMBERS 3–4

D. Jacquemart, J.-Y. Mandin, V. Dana, L. Régalia-Jarlot, J.-J. Plateaux, D. Décatoire and **L.S. Rothman** 237 The spectrum of acetylene in the 5-μm region from new line-parameter measurements

G. Faussurier and **R.M. More** 269 Non-local thermodynamic equilibrium response matrix

V.M. Devi, D.C. Benner, M.A.H. Smith and **C.P. Rinsland** 289 Nitrogen broadening and shift coefficients in the 4.2–4.5-μm bands of CO_2

J. Spelman, T.E. Parker and **C.D. Carter** 309 Fiber-coupled multiple-line infrared emission measurements to determine temperature, CO_2, and H_2O

M. Goto 331 Collisional-radiative model for neutral helium in plasma revisited

A.R. Degheidy, S.A. El-Wakil and **M. Sallah** 345 Polarized radiation transfer in a semi-infinite random medium

A.R. Deghiedy, M. Sallah and **M.A. Abdou** 359 Radiative transfer in random media with Rayleigh scattering

A.C. Vandaele, C. Hermans, S. Fally, M. Carleer, M.-F. Mérienne, A. Jenouvrier, B. Coquart and **R. Colin** 373 Absorption cross-sections of NO_2: simulation of temperature and pressure effects

V.M. Devi, D.C. Benner, M.A.H. Smith, L.R. Brown and **M. Dulick** 393 Absolute intensity measurements of the $^{12}C^{16}O_2$ laser bands near 10 μm

V.M. Devi, D.C. Benner, M.A.H. Smith, L.R. Brown and **M. Dulick** 411 Multispectrum analysis of pressure broadening and pressure shift coefficients in the $^{12}C^{16}O_2$ and $^{13}C^{16}O_2$ laser bands

J. Notholt and **R. Lehmann** 435 The moon as light source for atmospheric trace gas observations: measurement technique and analysis method

C.-Z. Dong, S. Fritzsche and **L.-Y. Xie** 447 Energy levels and transition probabilities for possible X-ray laser lines of highly charged Ni-like ions

Note

R. Ashby and **W.A. van Wijngaarden** 467 Lifetimes and polarizabilities of low lying lithium S, P and D states

PERGAMON

Journal of Quantitative Spectroscopy & Radiative Transfer 76 (2003) VI

www.elsevier.com/locate

AUTHOR INDEX

Abdou, M.A. 359
Ashby, R. 467

Bardet, J.P. 55
Benner, D.C. 289, 393, 411
Brown, L.R. 393, 411
Budak, G. 111
Büyükkasap, E. 27

Çakir, C. 111
Çam, H. 27
Carleer, M. 373
Carter, C.D. 309
Chalhoub, E.S. 193
Colin, R. 373
Coquart, B. 373

Dana, V. 237
Décatoire, D. 237
Degheidy, A.R. 345
Deghiedy, A.R. 359
Devi, V.M. 289, 393, 411
Dong, C.-Z. 447
Dulick, M. 393, 411
Durdu, B.G. 27

El-Wakil, S.A. 345

Fally, S. 373
Faussurier, G. 269
Fritzsche, S. 447

Güleçyüz, M.Ç. 1
Goto, M. 331
Grynko, Ye. 11

Han, S. 179
Han, S.-s. 41
Hermans, C. 373

Jacquemart, D. 237
Jenouvrier, A. 373
Jovanovic-Kurepa, J. 95

Kaşkaş, A. 1
Karabulut, A. 111
Küçükönder, A. 27
Küçükönder, E. 27

Lehmann, R. 435
Li, X. 179
Li, X.-d. 41
Liu, L.H. 225

Mandin, J.-Y. 237
Markushev, D.D. 95
Mérienne, M.-F. 373
Modest, M.F. 79
More, R.M. 269
Muinonen, K. 11

Notholt, J. 435

Parker, T.E. 309
Penner, S.S. 235
Plateaux, J.-J. 237

Régalia-Jarlot, L. 237
Rinsland, C.P. 289
Rothman, L.S. 133, 237

Sallah, M. 345, 359
Şahin, Y. 111
Shkuratov, Yu. 11
Smith, M.A.H. 289, 393, 411
Sogut, O. 27
Spelman, J. 309
Stamnes, K. 207
Stankevich, D. 11

Tanaka, T. 121
Terzic, M. 95
Tezcan, C. 1

Urban, J. 145

Valognes, J.C. 55
van Wijngaarden, W.A. 467
Vandaele, A.C. 373
Vitel, Y. 55

Wang, C. 41, 179
Wang, W.F. 33

Xie, L.-Y. 447
Xu, Z. 179
Xu, Z.-z. 41

Yan, B. 207